

DEPARTMENT OF FISH AND GAME
DIVING SAFETY PROGRAM
SCUBA Diver Applicant Package and Information (**Rev.2001**)

This packet contains the following information and forms:

1. SCUBA APPLICATION FORM (DFG Diving Safety Manual, Appendix 14) – Fill out this form completely, using extra pages if necessary. When submitting, be sure you have had your supervisor and manager(Administrator, Division Chief, or Regional Manager) sign the bottom of the form. Include a legible copy of the following certifications:

- Your basic Open Water SCUBA certification from a recognized RSTC organization, and any other advanced or specialty cards
- A Rescue Diver course from a recognized RSTC organization
- First Aid and CPR (CPR must have been within the last two years)
- An Emergency Oxygen Administration course(DAN or equivalent)

2. MEDICAL EVALUATION FORMS (DFG Diving Safety Manual, Appendices 1 - 3) – This includes a Medical History to be completed by the applicant and a Fitness For Diving Report to be completed by a physician after a physical examination. The examination must have been within 24 months of the scheduled DFG Diver Certification Course. The form should be returned directly to the applicant for inclusion in the completed application package.

3. SCUBA DIVER CHECKLIST FOR CERTIFICATION – This form lists the testing requirements to become a Department SCUBA diver. Note that the Confined Water Evaluation(*DSM, Section 4.32.3*)must be completed and verified **prior** to the certification course. If these skills are not performed satisfactorily and completely, applicants shall not be allowed to attend the certification course. An applicant should fill in the personal information on this form and bring it with him/her to the evaluation test site. Tests may be verified by members of the Diving Safety Board, their designees, or project supervisors. Be sure that every requirement is signed off.

4. DEPARTMENT OF FISH AND GAME DIVING SAFETY MANUAL – This document contains the operational mandates and auspices for all SCUBA activities. Applicants need to be thoroughly familiar with it provisions and equipment requirements **prior** to attending the certification course.

5. LIST OF REQUIRED SCUBA EQUIPMENT – This is contained in Section 3.00 of the *Diving Safety Manual*. All required equipment listed is mandatory for the certification course. Subject to your supervisor's approval, these items may be purchased or rented at Department expense. Any borrowed SCUBA equipment must comply with Department inspection and servicing guidelines as specified in the *DFG Diving Safety Manual*. Note: Regardless if a weight integrated BCD is to be utilized during the certification, applicants will still need to be competent with and provide a separate weight belt for the course.

Completed packages should be submitted to the Diving Safety Officer at least two weeks prior to the scheduled certification course. Submittal of the package does not guarantee a placement in the course. Openings are limited and filled on a first come, first served basis.

Candidates should submit completed packages directly to:

Department of Fish and Game

Diving Safety Program

Attn: Lt. Mark Windham

3201 S Street

Sacramento, CA 95816

916.227.5460 office voice

916.227.5169 office fax

mwindham@dfg.ca.gov e-mail

When your forms have been reviewed and approved, you should start on the Department *SCUBA Diving Examination* (DFG Diving Safety Manual, Appendix 13). The examination is an extensive open book, research test requiring use of the *DFG Diving Safety Manual* and the *NOAA SCUBA Diving Manual* as reference materials. Recreational SCUBA organization texts may provide good background material, but due to a wide range of standards, practices, and tables, be sure to base your answers on the texts listed. When completed, the entire examination should be copied. You may submit a copy to a Diving Safety Board member for review and correction, however the original must be brought to the certification course for group review and discussion. Since this is open book, applicants must receive a score of 90 percent to pass this phase of the certification process.

If you, or your supervisor, have any questions regarding the Certification Course schedules or content, completion of your package, equipment or skill requirements, please give me a call. I'm on the road with classes quite a bit, so consider giving me a little lead time to get back to you. Members of the Diving Safety Board are also available to help you. Good luck with the DFG Diving Certification process.

**DEPARTMENT OF FISH AND GAME
DIVING SAFETY PROGRAM
SCUBA DIVING CERTIFICATION APPLICATION**

Personal Data:

Name _____ Date of Birth _____ Age _____

Title _____ Branch/Division _____ Region _____

Work Address _____ E-Mail _____

Work Phone _____

Emergency Contact(s) _____ Relationship _____ Phone _____

Diving Certifications:

(Use back of sheet for additional information.)

<u>Course Title</u>	<u>Agency</u>	<u>Date Completed</u>	<u>Hours</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Experience:

Swimming _____ hours Boat Operation _____ hours Skin Diving _____ hours

Freshwater SCUBA _____ hours Ocean SCUBA _____ hours Com/Mil Diving _____ hours

Boat Diving _____ hours Surface Supplied _____ hours No. of Surf Entries and Exits _____

Please list your last 12 SCUBA dives:

	<u>Date</u>	<u>Location</u>	<u>Depth/Time</u>	<u>Activity</u>
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
12	_____	_____	_____	_____

Approvals: Supervisor _____

Reg. Mgr./Br. Chief _____

DIVING MEDICAL EXAM OVERVIEW FOR THE EXAMINING PHYSICIAN

TO THE EXAMINING PHYSICIAN:

This person, _____, requires a medical examination to assess their fitness for certification as a Scientific Diver for the California Department of Fish and Game. His /her answers on the Diving Medical History Form (attached), may indicate potential health or safety risks as noted. Your evaluation is requested on the attached SCUBA Diving Fitness Medical Evaluation Report. If you have questions about diving medicine, you may wish to consult one of the references on the attached list. Please contact the undersigned Diving Safety Officer if you have any questions or concerns about diving medicine or the California Department of Fish and Game standards. Thank you for your assistance.

Diving Safety Officer

Date

Printed Name

Phone Number

SCUBA and other modes of compressed-gas diving can be strenuous and hazardous. A special risk is present if the middle ear, sinuses or lung segments do not readily equalize air pressure changes. The most common cause of distress is Eustachian insufficiency. Most fatalities involve deficiencies in prudence, judgement, emotional stability or physical fitness. Please consult the following list of conditions that usually restrict candidates from diving.

(Adapted from Bove, 1998. bracketed numbers are pages in Bove)

1. Abnormalities of the tympanic membrane, such as perforation, presence of a monomeric membrane, or inability to autoinflate the middle ears.[5,7,8,9]
2. Vertigo including Meniere's Disease.[13]
3. Stapedectomy or middle ear reconstructive surgery.[11]
4. Recent ocular surgery.[15,18,19]
5. Psychiatric disorders including claustrophobia, suicidal ideation, psychosis, anxiety states, untreated depression.[20-23]
6. Substance abuse, including alcohol.[24-25]
7. Episodic loss of consciousness.[1,26,27]
8. History of seizure.[27,28]
9. History of stroke or a fixed neurological deficit.[29,30]
10. Recurring neurologic disorders, including transient ischemic attacks.[29,30]
11. History of intracranial aneurysm, other vascular malformation or intracranial hemorrhage.[31]
12. History of neurological decompression illness with residual deficit.[29,30]
13. Head injury with sequelae.[26,27]
14. Hematologic disorders including coagulopathies.[41,42]
15. Evidence of coronary artery disease or high risk for coronary artery disease¹. [33-35]
16. Atrial septal defects.[39]
17. Significant valvular heart disease – isolated mitral valve prolapse is not disqualifying.[38]
18. Significant cardiac rhythm or conduction abnormalities.[36-37]
19. Implanted cardiac pacemakers and cardiac defibrillators (ICD).[39,40]
20. Inadequate exercise tolerance.[34]
21. Severe hypertension.[35]

22. History of spontaneous or traumatic pneumothorax.[45]
23. Asthma². [42-44]
24. Chronic pulmonary disease, including radiographic evidence of pulmonary blebs, bullae or cysts.[45,46]
25. Diabetes mellitus.[46-47]
26. Pregnancy.[56]

¹ “Assessment of Cardiovascular Risk by Use of Multiple-Risk-Factor Assessment Equations.” Grundy et al. 1999. AHA/ACC Scientific Statement. <http://www.acc.org/clinical/consensus/risk/risk1999.pdf>

² “Are Asthmatics Fit to Dive?” DH Elliot, ed. 1996. Undersea Hyperbaric Medical Society, Kensington, MD.

SELECTED REFERENCES IN DIVING MEDICINE

Most of these are available from Best Publishing Company, P.O. Box 30100, Flagstaff, AZ 86003-0100, the Divers Alert Network (DAN), or the Undersea and Hyperbaric Medical Association (UHMS), Bethesda, MD.

ACC/AHA Guidelines for Exercise Testing. A report of the American College of Cardiology / American Heart Association Task Force on Practice Guidelines (Committee on Exercise Testing). RJ Gibbons, et al. 1997. Journal of the American College of Cardiology. 30:260-311.
<http://www.acc.org/clinical/guidelines/exercise/exercise.pdf>

Alert Diver Magazine; Articles on diving medicine
<http://www.diversalertnetwork.org/medical/articles/index.asp>

“Are Asthmatics Fit to Dive?” DH Elliot, ed. 1996. Undersea Hyperbaric Medical Society, Kensington, MD.

“Assessment of Cardiovascular Risk by Use of Multiple-Risk-Factor Assessment Equations.” Grundy et al. 1999. AHA/ACC Scientific Statement. <http://www.acc.org/clinical/consensus/risk/risk1999.pdf>

Diving Medicine, Third Edition, 1997. A. Bove and J. Davis. W.B. Saunders Company, Philadelphia.

Diving and Subaquatic Medicine, Third Edition, 1994. C. Edmonds, C. Lowery and J. Pennefather. Butterworth-Heinemann Ltd. Oxford.

Medical Examination of Sport SCUBA Divers, 1998. Alfred Bove, M.D., Ph.D. (ed.) Medical Seminars, Inc. San Antonio, TX.

NOAA Diving Manual, NOAA. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

U.S. Navy Diving Manual. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

MEDICAL EVALUATION OF FITNESS FOR SCUBA DIVING REPORT

Name of Applicant (Print or Type)

Date(Mo/Day/Year)

To The PHYSICIAN:

This person is an applicant for training or is presently certified to engage in diving with self-contained underwater breathing apparatus (SCUBA). This is an activity that puts unusual stress on the individual in several ways. Your opinion on the applicant's medical fitness is requested. SCUBA diving requires heavy exertion. The diver must be free of cardiovascular and respiratory disease. An absolute requirement is the ability of the lungs, middle ear and sinuses to equalize pressure. Any condition that risks the loss of consciousness should disqualify the applicant.

TESTS: Please initial that the following tests were completed.

☐ Initial Examination

☐ Re-examination (every 2 years)

____ Medical History
Complete Physical Exam with emphasis
on neurological and otological components
____ Chest X-Ray
____ Spirometry
____ Hematocrit or Hemoglobin
____ Urinalysis
____ Any further tests deemed necessary by
the examining physician

____ Medical History
Complete Physical Exam with emphasis
on neurological and otological components
____ Hematocrit or Hemoglobin
____ Urinalysis
____ Any further tests deemed necessary by
the examining physician

Additional testing for first exam over age 40
____ Resting EKG
____ Assessment of coronary artery disease
using Multiple-Risk-Factor-Assessment¹
(age, lipid profile, blood pressure, diabetic screening, smoker)

Additional testing for re-examination over age 40
____ Resting EKG
____ Assessment of coronary artery disease
using Multiple-Risk-Factor-Assessment¹

Note: Exercise stress testing may be indicated based on Risk-Factor-Assessment²

RECOMMENDATION:

- ☐ APPROVAL. I find no medical condition(s) which I consider incompatible with diving.
- ☐ RESTRICTED ACTIVITY APPROVAL. The applicant may dive in certain circumstances as described in REMARKS.
- ☐ FURTHER TESTING REQUIRED. I have encountered a potential contraindication to diving. Additional medical tests must be performed before a final assessment can be made. See REMARKS.
- ☐ REJECT. This applicant has medical condition(s) which, in my opinion, clearly would constitute unacceptable hazards to health and safety in diving

¹ "Assessment of Cardiovascular Risk by Use of Multiple-Risk-Factor Assessment Equations." Grundy et al. 1999. AHA/ACC Scientific Statement. <http://www.acc.org/clinical/consensus/risk/risk1999.pdf>

ACC/AHA Guidelines for Exercise Testing. A report of the American College of Cardiology / American Heart Association Task Force on Practice Guidelines (Committee on Exercise Testing). RJ Gibbons, et al. 1997. Journal of the American College of Cardiology. 30:260-311. <http://www.acc.org/clinical/guidelines/exercise/exercise.pdf>

REMARKS:

I have discussed the patient's medical condition(s) which would not seriously interfere with diving but which may seriously compromise subsequent health. The patient understands the nature of the hazards and the risks involved in diving with these defects.

Date **Signature** **M.D.**

Name (Print or Type)

Address

Telephone Number

My familiarity with applicant is:

- ☐ **With this exam only**
- ☐ **Regular Physician for _____ years**
- ☐ **Other (describe) _____**

My familiarity with diving medicine:

- ☐ **On attached list of physicians**
- ☐ **Other (describe) _____**

APPLICANT'S RELEASE OF MEDICAL INFORMATION FORM

I authorize the release of this information and all medical information subsequently acquired in association with my diving to the _____ Diving Safety Officer and Diving Control Board or its designee at (place) _____ on (date) _____.

Signature of Applicant _____

DIVING MEDICAL HISTORY FORM
(To Be Completed By Applicant-Diver)

Name _____ Sex _____ Age _____ Wt. _____ Ht. _____

Sponsor _____ Date ____ / ____ / ____
(Dept./Project/Program/School, etc.) (MM/DD/YYYY)

TO THE APPLICANT:

SCUBA diving makes considerable demands on your physical and emotional condition. Diving with particular defects amounts to asking for trouble not only for yourself, but to anyone coming to your aid if you get into difficulty in the water. Therefore, it is prudent to meet certain medical and physical requirements before beginning a diving or training program.

Your answers to the questions are more important, in many instances, in determining your fitness than what the physician may see, hear or feel when you are examined. Obviously, you should give accurate information or the medical screening procedure becomes useless.

This form shall be kept confidential. If you believe any question amounts to invasion of your privacy, you may elect to omit an answer, provided that you shall subsequently discuss that matter with your own physician and he/she must then indicate, in writing, that you have done so and that no health hazard exists.

Should your answers indicate a condition that might make diving hazardous, you will be asked to review the matter with your physician. In such instances, his/her written authorization will be required in order for further consideration to be given to your application. If your physician concludes that diving would involve undue risk for you, remember that he/she is concerned only with your well being and safety. Respect the advice and the intent of this medical history form.

			Please indicate whether or not the following apply to you	Comments
			Trouble with your ears, including ruptured eardrum, difficulty clearing your ears, or surgery.	
			Trouble with dizziness.	
			Eye surgery.	
			Depression, anxiety, claustrophobia, etc.	
			Substance abuse, including alcohol.	
			Loss of consciousness.	
			Epilepsy or other seizures, convulsions or fits.	
			Stroke or fixed neurological deficit.	
			Recurring neurological disorders, including transient ischemic attacks.	
			Aneurysms or bleeding in the brain.	
			Decompression sickness or embolism.	
			Head injury.	
			Disorders of the blood, easy bleeding.	
			Heart disease, diabetes, high cholesterol.	
			Anatomical heart abnormalities including patent foramen ovale, valve problems, etc.	
			Heart rhythm problems.	
			Need for a pacemaker.	
			Difficulty with exercise.	
			High blood pressure.	
			Collapsed lung.	
			Asthma	
			Other lung disease.	
			Diabetes mellitus	
			Are you pregnant?	
			Have you had surgery? If yes explain below.	
			Have you been hospitalized? If yes explain below.	
			Do you take any medications? If yes list below.	
			Do you have any allergies to medications, foods, environmental? If yes list below.	
			Do you smoke?	
			Do you drink alcoholic beverages?	
			Do you have a family history of high cholesterol?	
			Do you have a family history of heart disease or stroke?	
			Do you have a family history of diabetes?	
			Do you have a family history of asthma?	

Please explain any "yes" answers to the above questions:

I certify that the above answers and information represent an accurate and complete description of my medical history. _____

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SCUBA DIVER POOL EVALUATION CHECKLIST

Swimmer Name: _____ **Date:** _____

1. 1000 Foot Swim **Completed: Yes No** **Time:** _____

(Standard: Swimmer shall complete this test without the use of fins or floatation device and without touching the bottom in under nine minutes.)

2. 75 Foot Underwater Swim Completed: Yes No

(Standard: Swimmer shall complete this test on one breath without the use of fins and without touching the bottom.)

3. Weight Recovery **Completed: Yes No**

(Standard: Swimmer shall pick up a 15 pound weight belt or package off a 15 foot bottom and hand it off at the surface breath hold without the use of fins.)

4. 75 Foot Weight Swim **Completed: Yes No**

(Standard: Swimmer shall carry a 15 pound weight belt or package continuously for 75 feet without the use of fins and without touching the bottom.)

5. Survival Swim **Completed: Yes No**

(Standard: Swimmer shall maintain surface buoyancy continuously for 15 minutes without the use of fins or floatation device and without touching bottom.)

Certification by supervisor or Diving Safety Board Member:

I certify that I witnessed the named swimmer complete or not complete these tests according to the standards listed.

Name: _____ **Title:** _____

Signature: _____

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Required Equipment for Diver Certification Course

Mask (With Nose Pocket)

Fins

Snorkel

Wetsuit (With Boots & Gloves, Appropriate for Water Conditions)

Weight Belt (Full Ballast with Quick Release)

Regulator (Balanced First Stage, Single Hose Second Stage)

Alternate Air Source (Octopus, Air 2, Redundant)

Submersible Cylinder Pressure Gauge

Air Cylinders (Two; Either Steel or Aluminum +/- 80cf)

Buoyancy Control System

Cylinder Backpack (If not integral with BCS above)

Depth Gauge

Diving Watch / Timer

Submersible Compass

Knife / Cutting Tool

Diving Tables (US Navy No Decompression Limit)

Diving Light

Whistle

Underwater Slate

Note: This is a list of minimum required equipment. You may bring more but storage on boats and/or diving facilities is limited. If you utilize a Buoyancy Control System with integrated weight capability you will still need to bring a separate weight belt and weights. Cylinders may be available at the training site.